

MEMORANDUM FOR:

DDI/CSS - Rm. 2F24
HQS. BLDG.

Attached is the sanitized
version of the JEC Hearing
transcript. Please have the
DDI's office look it over
before passing it on to

Date 16 Dec 82

JEC**ROUTING AND INDEXED SHEET****SUBJECT:** (Optional)**FROM:**

[redacted], DDI/CSS

REFERENCE**NO. DDI-****10215/82****DATE****16 December 1982****TO:** (Officer designation, room number, and building)**DATE****RECEIVED****FORWARDED****OFFICER'S INITIALS****COMMENTS** (Number each comment to show from whom to whom. Draw a line across column after each comment.)1.
Robert Gates, DDI

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Attached is the sanitized (unclassified) version of the JEC briefing on December 1st. This version has been approved by SOVA and Harry Rowen. We will send it forward to the JEC after we have received DDI approval.

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C O N T E N T S

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STATEMENT OF

HENRY ROWEN, CHAIRMAN,
NATIONAL INTELLIGENCE COUNCIL

accompanied by:



STAT

Office of Soviet Analysis, Central Intelligence Agency

Hearing on
ALLOCATION OF RESOURCES TO RUSSIA AND CHINA

- - -

Wednesday, December 1, 1982

United States Senate

Joint Economic Committee

Washington, D.C.

The committee met at 10:00 a.m. in room 5110, Dirksen Senate Office Building, the Honorable William Proxmire presiding.

Present: Senators William Proxmire, Steven D. Symms, and Mack Mattingly.

Senator Proxmire. The subcommittee will come to order.

I am happy to welcome the Honorable Henry Rowen, Chairman of the National Intelligence Council, to present this year's CIA assessment of recent economic developments in the Soviet Union.

I have asked that this year's presentation deal with the capabilities and vulnerabilities of the Soviet economy or its strengths and weaknesses.

Mind you, there is much confusion about the state of the Soviet economy. It is partly because of the heavy emphasis in much of the literature about the Soviet Union on shortcomings and failures in their system. But all the knowledgeable persons who have followed the subject know that there have also been accomplishments and successes.

It is a case of a glass which can be correctly described as half full or half empty. But the problem is that by looking only at the shortcomings, we may deceive ourselves into underestimating the economic strength of our principal potential adversary. We may also be drawing incorrect conclusions about the Soviet economic system.

In addition, this is an especially important time to try to take a fresh look at the Soviet Union because of the transfer of power from the late Leonid Brezhnev to Yuri Andropov.

Finally, I have read your excellent statement, and I appreciate it very much. I would like to ask that you provide me with an unclassified version of it as soon as possible so it could be made available to the rest of the Congress and the

public. I also hope the transcript of today's hearing can be quickly sanitized so that it can be printed and released.

Mr. Rowen, after you have introduced the witnesses who have accompanied you, you may proceed with your statement, and then we will have a dialogue.

I would appreciate it very much if you could summarize your statement as much as possible. I did have a chance to read it, and you were very good to make it available well in advance. And I am grateful for that.

We would like as much as possible to maximize the time we have for questioning.

STATEMENT OF HENRY ROWEN, CHAIRMAN, NATIONAL INTELLIGENCE COUNCIL, ACCOMPANIED BY: [REDACTED] STAT

[REDACTED] OF THE OFFICE OF SOVIET ANALYSIS STAT
DEPUTY DIRECTORATE OF INTELLIGENCE, CIA.

Chairman Rowen. Yes. Thank you, Mr Chairman.

Let me introduce the people on this side of the table.

[REDACTED] to my left, Chief of the Soviet Economy Division STAT
of the Office of Soviet Analysis of the CIA.



STAT

Chairman Rowen. All experts on the Soviet economy.

We will provide an unclassified version as quickly as possible.

Let me just hit a few high points from the statement.

We agree that there is a good deal of confusion about the Soviet economy which has more to do with interpretation of the Soviet performance than it does the assessment of that performance itself. Western observers have tended to describe Soviet economic performance as "poor" or "deteriorating" at a time when defense spending continues to grow and the GNP in real terms continues to increase to the point that it is second in size only to that of the United States.

So these conflicting interpretations are really not wrong; it is just that there is certainly a gap between Soviet performance and plans, stated goals, and what they actually do and a clear decline in the Soviet performance relevant to the stated goals.

This does not mean that the Soviet Union economy is about to collapse, however, or that it has really lost its viability. In fact, collapse is a very remote possibility indeed. Our projections suggest that growth in GNP will continue, although at a slow and diminishing pace.

Growth is being retarded by a number of factors, some of which are beyond Soviet control and reflect weaknesses of the Soviet system. Others are within their control and represent policy choices. For example, the allocation of resources to defense. That could change. It is unlikely, however, to change substantially in the near term.

The upshot is that we expect annual growth to average one to two percent for the foreseeable future. Per capita consumption could level off or even fall slightly.

Now, let me turn to the Soviet objectives and priorities.

The first one is building military power. They have had that predominant goal for a very long time.

The USSR has also put a high priority on rapid economic growth for about thirty years. And, indeed, the good life of the Soviet populace in the form of a rising standard of living has been important for almost thirty years. Soviet consumers, however, have generally been the residual claimants, with improvement in their material well-being subordinated to the demands of the military and to the high rate of capital investement necessary to insure rapid growth of GNP.

It appears that Soviet consumer interests are now being treated somewhat less cavalierly, a little more seriously, than before. One important piece of evidence for this is the fact that the eleventh five-year plan called for slower growth in investment than in consumption.

In pursuit of these national objectives, successive regimes have given heavy industry priority status because it is the source of military and investment goods. Despite some experimentation with decentralization of economic administration, the Soviet leadership has remained firmly committed to strict central planning and management of most economic activity.

The economic performance in terms of objectives has been mixed. It has clearly built a very powerful military force. Under Khrushchev, the emphasis was on strategic nuclear programs. Under Brezhnev, it was an across-the-board expansion.

In addition to developing its military power, it has been able to maintain a rapid rate of economic growth, an average annual rate of 4.6 percent from 1950 through 1981, a very respectable growth rate, as the CIA estimates it. The GNP of the United States during the same period increased by 3.4 percent per year. But the Soviet rate has slowed markedly in the last four years.

If you turn to the first figure you have before you, you can see how this growth rate has progressively declined from the very high levels in the 1960s, in both GNP and industry, to progressively lower levels of growth, down to 1 to 2 percent in the last several years. This year, we expect GNP growth to be about 1.5 percent.

I might note that this slowdown is not unique to the Soviet economy; it has a parallel in the OECD countries. In fact, the slowdown of the West very closely parallels the slowdown in the East, a point that is noted. In 1980-81, GNP growth in OECD averaged 1.2 percent.

The slowdown in the Soviet Union reflects in part four consecutive poor or mediocre harvests, but the problems are not limited to the agricultural sector. Industry is also having problems. Serious bottlenecks have emerged that have nothing to do with agriculture. Growth in industrial output, which averaged 6 percent a year in the first half of the seventies, fell abruptly in 1976, and from 1976 to 1981 averaged just slightly over 3 percent. The decline in growth has been steady. Industrial production grew only 2 percent in 1981, and it is

expected to rise by slightly less than 2 percent this year.

The high priority accorded to military strength is suggested by the continuing rise in defense spending which has prevailed for a long time, since the mid 1960s.

As observed earlier, the leadership concern about consumer welfare seems to have somewhat diluted the commitment to future growth. We know this because the share of the GNP allocated to fixed capital investment has more or less stabilized in the last few years at about 26 percent compared to 20 percent in 1960.

The slowing investment growth is associated with bottlenecks in sectors providing building materials and machinery. But it also stems from a political decision to protect Soviet consumers in a time of tightening economic constraints. Nonetheless, consumption--as shown in Figure 2--still accounts for only 55 percent of the Soviet GNP--far less than the share in most non-communist industrialized countries.

Let me make some comments about the eleventh (1981-85) five-year plan so far. The results of the first two years of this plan have been most disappointing to Soviet leaders. It is clear most of the important goals cannot be met. The plan was excessively ambitious from the start, and performance has been far below plan. The small increase in agricultural output this year will do little more than offset the decline of 1981. The slump in steel is particularly damaging to machinery production. That shortfall, together with the shortfalls in the output of building materials, threatens to curtail growth in construction.

From the beginning, the eleventh five-year plan depended on large productivity increases. The underfulfillment of these productivity goals has been very striking. The rise in industrial labor productivity averaged only 1.4 percent in the years 1981-1982, far below the 4.5 percent increase called for by the plan.

If you turn to figure 3, you will see what has happened to the incremental capital output ratios--that is, the amount of additional capital that has to be put in to obtain an additional unit of output. It has been rising very sharply since the early 1970s, and there is little prospect that this rise will soon end. So we have then not an explanation, really, but an observation that more capital is not producing that much more goods. Productivity growth is not occurring at anything like the rate looked for in the plan.

There have been a few bright spots in the Soviet economic performance, however. Natural gas production is most impressive and continues to rise at a rapid rate--7 percent in 1981, and nearly 8 percent this year. Overall energy production as a whole is a plus. 1982 oil production continues to inch ahead--about 0.7 percent this year. Coal output has reversed its decline and apparently will rise by about 2 percent. Even so, it will barely exceed the 1980 level.

The Soviet Union has also improved its hard currency balance of trade this year. If you turn to the next figure, figure 4, you will see the experience during the 1970s when hard currency imports were rising more sharply than exports. The sharp drop

off in the growth of exports in 1981 produced a significant imbalance in hard-currency trade, a deficit which last year was about \$4 billion, causing some anxiety in Western financial circles. Judging by the trade results in the first half of this year, this deficit has been reduced by about half, to perhaps \$2 billion.

The central authorities simply decided they would export more oil and hold down imports. The Soviets have paid a price for this, however. They had to reduce their deliveries of oil to Eastern Europe and domestic consumption. They also accepted a reduction in the value of hard-currency imports, scaling back purchases of Western equipment and consumer goods needed to help modernize Soviet industry.

Let me say a few words about the basic strengths of the economy. It is a big economy as figure 5 shows, with about half or 55 percent of the US GNP this year, \$1.6 trillion. Per capita GNP is almost \$6,000. It also has a large population and a large labor force, well trained and well educated. Literacy is almost universal, and the very heavy emphasis on mathematics, engineering, and science is important for a technologically oriented society. One-third of the total instruction time in secondary schools is devoted to mathematics and science.

There has also been an enormous growth in capital assets since the Second World War. The stock of capital increased almost eleven fold between 1950 and 1980 and over four fold from 1960 to 1980. The amount of capital per worker has increased almost three fold. This capital is largely invested in industry,

agriculture, transportation, communications and construction. Only about 15 percent of the total gross fixed capital consists of housing or is used to provide services such as health care and education.

The Soviet Union is also very well endowed with natural resources. Table 1, which I believe is before you, shows for various minerals, fuels, and non-fuel minerals, the size of Soviet reserves and their share of world reserves, and the years until exhaustion at 1980 levels of production. In 1980, Soviet reserves of natural gas represented 40 percent of the world's proven reserves. Coal reserves are very large.

Senator Mattingly. May I ask you a question?

Chairman Rowen. Yes.

Senator Mattingly. I was talking about gas. You said that years to exhaustion was large. Is that 65 years?

Chairman Rowen. Yes.

Senator Mattingly. Does that take into consideration the new pipeline they are building or not?

Chairman Rowen. Yes. Well, that is 1980 production which doesn't include the pipeline. But that is really not such a large part of total production in any case.

Senator Mattingly. 65 years is not very long.

Chairman Rowen. Well, by Western standards, that is very long indeed, in terms of proven reserves, not estimated reserves. Typically, Western firms would have ten or fifteen years of proven reserves.

Senator Mattingly. Do you have any figures about what it

would be with utilization of the new pipeline they are building?

No. It might be reduced taking into account the probable growth of gas production after 1980, probably to 40 to 45 years, something like that. STAT

Senator Mattingly. Thank you.

Chairman Rowen. It is still very long by Western standards.

Senator Proxmire. You might point out that in the fifteen-year figure, we have kind of a moving average.

Chairman Rowen. Oh, yes.

Senator Proxmire. If I can remember fifty years ago, they used to talk about how we had fifteen years in this country. And I presume you might have the same kind of situation there; is that right?

Chairman Rowen. Perhaps one of my colleagues could speak to their estimated and proven reserves. I was referring to the Western standard, but that is sort of a shelf inventory. It costs money to find it. So it is kept down to about a ten- to fifteen-year period.

I assume that this figure will grow, too, although it is a broader definition of reserves.

Yes. It includes the gas reserves in West Siberia that have already been tapped. Up on the Yamal Peninsula, there is still a great deal of gas that remains to be proven and perhaps also in Siberia. STAT

Chairman Rowen. Given this wealth of human capital and material sources, the Soviet Union is highly self-sufficient.

The next chart, figure 6, compares the degree of import

dependence on the United States and the Soviet Union for a variety of minerals. And the pattern is clear. We have a high degree of import dependence relative to the Soviet Union, which has a sizable import share only for bauxite and tin. They are net exporters of energy, namely oil and natural gas, a total of about 4 million barrels a day equivalent or about 15 percent of total energy production. They are major exporters of many metals, precious metals, as well as metal products, chemicals, and timber.

The USSR is really highly self-sufficient, but not entirely. It is clear that imports from the West have become critical to efforts to improve or simply maintain the quality of the Soviet diet. In 1981, imports of grain and other agricultural products reached almost \$12 billion, about 40 percent of the USSR's total hard currency purchases. The imports of grain have to do largely with providing the Soviet population with meat, with the composition of food consumed rather than calories. If you look at figure 7, you can see the composition of diets in the United States and the Soviet Union. The pattern is very similar for all categories except for meat and grain products. The Soviets consume much more grain products and potatoes and much less meat than we do. Imports are also important in relieving critical shortages in industry, spurring technological progress, and generally improving Soviet economic performance.

The USSR's highly centralized, rigid system has many disadvantages, but one of its few advantages is that it enables

them to mobilize resources and crash programs to achieve priority objectives. This, of course, is most obvious in its success in building up Soviet military might. But it has been able to do some other things aside from the military to achieve important economic goals. The most notable is in the development of natural gas, which is a big success story. They have a lot of gas, and they have succeeded in developing it, moving it, using it. It will play a pivotal role in meeting the energy needs of the economy in the 1980s, particularly as a substitute for crude oil in industry, but also as a hard currency earner.

The nuclear power industry, although it has not met the full expectations of the leadership, has done quite well. We expect that output of nuclear-generated electricity will increase by about 17 percent a year during the first half of the 1980s and supply about 11 percent of Soviet electricity by the end of that period.

And for some other natural resources, the USSR is also doing pretty well. It is second only to South Africa in the production of gold. Production in 1981 was about 325 tons. And the stock of gold is about 1900 tons, worth over \$25 billion at current prices. And they produce other metals, whose production is likely to increase.

Now to the weaknesses. These are, I think, generally familiar to you. Soviet performance has been hurt in recent years by declining increments to the labor force and by the difficulty of extracting and transporting energy and other raw material inputs.

First, let me take up the labor situation. If you turn to figure 8, you will see what is happening to increments to the working-age population. It is falling very rapidly during this period and will fall further in the latter part of the 1980s.

Senator Proxmire. Let me interrupt you for a minute. I notice that you cite a rising mortality rate among males in the 25 to 44-age range. That is startling. What is the cause for that? That is in the prime of a worker's life.

Chairman Rowen. The cause is speculative.

Senator Proxmire. What?

Chairman Rowen. We can only speculate about the causes. Growing alcoholism is a contributor, industrial accidents another. Perhaps there are other explanations.

One possible cause that has been advanced is the effects, the delayed effects, of pollution as a result of the development of some of these industries 15 to 20 years ago. STAT

Senator Proxmire. Has this risen to a point where the mortality rate is much higher than it is in this country, say, for males of that age or than it was in Russia before?

Chairman Rowen. I believe so.

Substantially higher. STAT

Senator Proxmire. Twice as high; three times?

I don't know; I'm sorry. STAT

Senator Proxmire. That is the first time I have seen that observation.

Chairman Rowen. On that point, it is my impression that that the turnaround is clear and that the difference is

substantial, but we can get those figures for you.

Senator Proxmire. It is confined to males, not females?

Chairman Rowen. I believe in this range, it is confined to males. We have no demographic expert here, I believe, so we will have to provide that. As the chart shows, the fall-off in the growth of the working-age population is very sharp. It grew by 24 million from 1971 to 1981, and from 1981 to 1991 it will grow by only 5 million.

Other factors are going to complicate the labor problem. Large-scale migration from the country to urban areas, which was an important source of labor for industry, has slowed considerably. In addition, rural residents in the Central Asian republics where the increments to population of working age will be highest don't want to migrate.

Even in the raw materials that the USSR has in great abundance, these are increasingly inaccessible, and the cost of exploiting them has been going up sharply. In oil, they are going to have to go to more remote regions. The infrastructure is not developed. There is a big investment required there. Their coal reserves in the European USSR are increasingly depleted. And they have to dig deeper and mine thinner seams and go to more distant deposits. During the last half of the seventies, more than 80 percent of new mine output was needed to offset depletion in older underground operations. Even natural gas is becoming more expensive. As the USSR moves to more remote areas, and the same is true of copper, nickel, bauxite, and iron ore.

If you turn to the next chart, you will see that the increase in fixed capital investment has also slowed markedly. This deceleration can be seen in connection with the 1981-85 plan. The plan called for investments in 1981-85 to rise by less than 2 percent a year, by far the lowest planned rate of increase in the post World War II period. The growth from 1971-75 to 1976-1980 was nearly 30 percent.

All of this means that the traditional Soviet growth formula, relying on lavish use of labor, capital, and raw materials, doesn't work any more. And they recognize the need for a new approach and have been stressing the importance of switching from an extensive to an intensive pattern of growth. That is to say, growth must come largely from productivity gains, from more efficient use of resources.

But the productivity gains have not been forthcoming. The average productivity of plant and equipment has been falling for several years, and labor productivity has been rising at steadily declining rates. Figure 10 shows this very dramatic falloff in the growth of labor productivity expressed in terms of GNP per worker or industrial production per worker.

Senator Proxmire. Still, as you point out their growth in labor productivity is much higher than ours.

Chairman Rowen. Well, ours has been falling for a while. It has turned up most recently. I would say it is comparable in terms of growth. Of course, the absolute level of Soviet productivity is very much lower than ours. The Soviet system is very poorly suited to fostering production efficiency for many

reasons.

Centralized management is one. Centralized control over economic activities has been on the increase for the last several years. It is headed in the wrong direction. They also have unrealistic goals which create a gap between what they want to do and what is possible. And this system chronically operates under conditions of strain and shortage, which, among other things, gives enterprises a strong incentive to hoard--intensifying bottlenecks and leading to more hoarding in a depressing circle of waste.

A third reason is that centralization and unrealistic planning means that the behavior of factory directors is largely dictated by the urgency of meeting the plan imposed. Trying to meet all of the various success indicators in the plan has adverse results because the array of indicators such as physical volume of output, gross value of output, value added, material savings, and productivity are often inconsistent and contradictory. And managers attempt to meet these targets at the expense of what is economically rational from the standpoint of the central authorities and society as a whole. For example, managers try and maximize the gross value of output, which encourages them to make their production as material intensive as possible.

And finally, technological progress has been impaired by the separation of research, development, and production in different organizations, which erodes the stimulus to innovation. They have no competitive marketplace to force the developer and

producer to introduce better products and technologies. Andropov told the Plenum of the Central Committee of the Party last week that producers tend to view technological change with hostility, which is true because the introduction of new products at a plant initially disrupts serial output, jeopardizing plan fulfillment and rewards.

One of the greatest areas of weakness has been and continues to be agriculture. Its performance over the last four years certainly makes that very clear. Farm output since 1978 fell steadily through 1981 and was 10 percent below the 1978 level and this year is expected to rise but by only 1 or 2 percent.

This is partly bad weather. But bad weather is to be expected in the Soviet Union, and it is only a partial explanation for performance. The administration of Soviet agriculture is much too centralized. Prices of both farm inputs and outputs are set by the central authorities at levels which are inconsistent with the national plan. Although they have invested a lot in agriculture, direct deliveries to the agricultural sectors of needed inputs--for example, fertilizers--have been insufficient. Meanwhile, the proportion of aged and unskilled workers in the agricultural labor force is very high.

Brezhnev recognized the rise in popular demand for quality foods. He told the Central Committee in 1981 that food was the most important political and economic problem of the eleventh five-year plan. This increase in demand for meat, vegetables, and the like reflects rising consumer expectations and growing incomes. The inability to satisfy this demand is a function of

both stagnant output of most livestock products and the regime's unwillingness to raise prices in state stores. This unwillingness was reinforced by what happened in Poland.

The Soviet leadership has tried to ease the imbalance between supply and demand by allowing various local rationing schemes under which customers may buy only limited amounts of certain foods in state stores. But long lines for meat, milk, and milk products remain widespread. To soften the effect of shortages on the work force, the regime has redirected substantial amounts of quality food from state retail outlets to factories and other economic enterprises. Naturally, the high-priority industries are given preference.

It was against this background that Brezhnev last May unveiled his Food Program, which was intended to boost food production and reduce dependence on imports. But it is mainly a repackaging of old policies. It does nothing to reduce day-to-day bureaucratic interference in agriculture, and it fails to restructure prices sufficiently or change the incentive system.

There are other problems as well. Steel is a case in point. Shortages of steel, both basic steel products and high quality steel, are holding back growth of civilian machine building and other sectors. The appetite of the Soviet system for steel is probably unparalleled. Khrushchev used to speak of metal eaters in the Soviet Union. The consumption of steel in the USSR is rather more--last year was rather more--than in the United States although Soviet GNP is about half that of the United States. So steel consumption per unit of output is

roughly twice as high in the Soviet Union as in the United States. And that is a major bottleneck. These shortages won't be remedied quickly. Investment requirements to cope with the declining quality of ore are escalating rapidly, and new capacity takes a long time to come on line. And supplies of coking coal and iron ore are likely to be tight for several years.

Another bottleneck area is transportation. You have seen the stories that the transportation minister was fired yesterday, I suppose. The snarls on the railroads have disrupted economic activity across the board, but most particularly in the development of raw materials--coal, iron ore, timber, and scrap-metal.

In energy, there are different problems. Coal production, as I mentioned, has been hampered by deteriorating underground mining conditions. The cost of increasing coal production has risen. Oil production has increased, although slowly. And here, too, the effort required is very large. Finally, shortages of raw materials and depletion of fuel and power supplies have caused a slowdown in the production of construction materials.

As I mentioned before, this system does not depend on trade for survival. Its imports equal about 12 or 13 percent of GNP. Those from the West are only about 5 percent. But these purchases can be quite critical in oil and gas, the sectors for which the USSR will have to import a broad range of Western equipment in order to sustain production. Pipelaying equipment for large-diameter pipe, for example, has been produced only in the West. And we estimate that the Soviets will need to import

at least three million tons of steel pipe per annum during the 1980s to build all the pipelines they have scheduled. They also need sophisticated exploration equipment, high capacity submersible pumps for the oil fields, and probably high-powered turbines for gas compressor stations.

Their requirements for quality steel should result in annual imports of steel other than pipe of about \$2 billion, at least until the mid-1980s, and purchases of chemical equipment and technology probably will continue to be large. Imports of grain and other agricultural commodities, of course, almost certainly will remain high. Grain imports in 1979-82 averaged more than 30 million tons a year.

Soviet ability to earn hard currency is already under pressure and may well diminish. The fact that oil production has perhaps leveled off and may decline is one reason. We expect oil exports to the West, which account for about one-half of Soviet's hard currency earnings from merchandise exports to fall. This will be partly offset by increased exports of natural gas, but only partly.

Primarily because of softening energy prices, Soviet terms of trade vis-a-vis the West will probably be less favorable in the 1980s than in the 1970s, when the upward spiral in oil and gold prices brought the Soviet Union a windfall gain. Soviet manufactured goods, which are generally not competitive in Western markets, are unlikely to take up the slack. And finally, less developed countries, including OPEC countries, probably will be less able to pay for Soviet arms, which is also an important

source of hard currency.

While the USSR has a lot of gold, it is reluctant to undertake massive sales and force the price down. So on balance, the unpromising export outlook suggests that the USSR may have to do with little if any increase in real imports in the 1980s.

Another dimension is their strained economic relations with Eastern Europe. Because it wishes to maintain political and social stability in Eastern Europe, the Soviet Union has given favorable economic treatment to five of the six Warsaw Pact countries, the exception being Romania. It takes a couple of forms--subsidization and credits.

Thus, subsidies are extended really through preferential terms of trade. In fact, the Soviet Union sells energy--namely, oil, increasingly natural gas, and other raw materials--for less than world market prices and pays more than world prices for the manufactured goods it buys from Eastern Europe. The estimates of the cost of this subsidy are very controversial. It is hard to estimate, but one Western estimate puts the cost at almost \$70 billion over the period 1960 to 1980.

The credits come mainly from the surpluses the Soviet Union has consistently run in its trade with Eastern Europe since the mid-1970s, although the Soviet Union has also given some direct hard currency assistance to Poland.

Eastern Europe, which has severe economic problems of its own, continues to depend on Soviet help, but the USSR's economic stringencies have increased greatly the cost of supporting Eastern Europe. Moscow has apparently decided to reduce the

priority given to Eastern Europe's economic needs in the future. Oil exports to Eastern Europe, for example, were cut this year, and its trade surplus to that area apparently declined as well. The subsidies will probably fall also, but a drastic cut is unlikely for the reason I mentioned--the importance they attach to political stability in Eastern Europe.

Finally, let me make a couple of comments about the uncertainties attached to the growth forecast. First of all, Mr. Andropov's advent to power has not altered our assessment of Soviet economic prospects. Moreover, Andropov's comments to the Central Committee last week point to no significant changes in economic policy, but this is very early, and there could be many changes ahead. So we could be wrong for this and other reasons. Our forecast of an annual average growth in real GNP of 1 to 2 percent could be off the mark.

Let me suggest some reasons why this growth might turn out to be more rapid than suggested. Good weather would help. A shift of resources away from defense to investment would help. If the regime were somehow to be able to divert resources from defense to consumption, morale and labor productivity would be improved. Above all, the Soviet economic future would be brighter if efficiency could be boosted by mitigating some of the most damaging features in the system. Productivity might be raised, for example, without a drastic overhaul of the system by a more balanced allocation of investment to vital economic areas such as transport and by stopping the proliferation of success indicators and overlapping lines of authority that has

characterized the so-called reforms of past years. If Andropov could, assuming his rule is securely established, undertake basic changes that significantly reduced centralization and gave substantially greater play to market forces, the prospects would be very much better.

Things might be worse: Continued bad weather would depress agricultural output. In any case there is reason to believe that the generally favorable weather between the early 1960s and mid-1970s was an aberration and that while weather conditions for crops may improve they are unlikely to be as good as they were in the period when Soviet farm output increased rapidly.

If they decide to accelerate the growth of defense spending at the expense of investment, it would be difficult to sustain much, if any, growth. If the ripple effect of the current bottlenecks intensifies, GNP growth could fall off. And finally, if public cynicism and apathy deepen, work effort declines, and active unrest develops, economic growth could halt or go into reverse.

Of these possibilities, serious widespread unrest, as the Polish experience suggests, is the one most likely to hit aggregate output the hardest. However, we consider such an eventuality unlikely. It would probably require a steep and prolonged drop in living standards in the first instance. Large-scale labor disturbances might occur, however, if Andropov pursued with excessive zeal his promised campaign to impose greater discipline in the work force.

In sum, Soviet economic growth has slowed markedly in recent

years, reflecting partly declining increments to the supply of labor and the stock of capital and sharply increased costs in producing and transporting energy and raw materials. The deceleration also stems from the inability of the system to increase productivity sufficiently. Indeed, economic growth has sharply decelerated even before the labor and energy shortages have reached their maximum severity.

The consequences of this slowdown are, first of all, harder choices for the leadership in making its allocation among consumption, investment, and defense. Secondly, the USSR has certainly lost much of its attractiveness as a model for the rest of the world, especially the third world. We are not saying, however, that the system is going to collapse. It is not going to collapse. Indeed, we expect GNP to continue to grow, although slowly. And so far, defense spending has continued to rise.

That completes my summary of the statement.

Senator Proxmire. Thank you very much, Chairman Rowen.

Chairman Rowen, now that Brezhnev has been replaced, what changes in domestic and foreign economic policies or priorities is Andropov likely to initiate based on statements made thus far? And what do you know about him?

Chairman Rowen. We think there has been some exaggeration by the press of his commitment to Hungarian style reform. He has recommended, did recommend a few days ago, some cautious experimentation, increasing the operational autonomy of some production units. And he stated the USSR might learn from the Eastern European experience. This repeats the line that Brezhnev

voiced earlier. It is not new to say such things about experimentation. On the other hand, there is little reason to believe he would manage the economy differently in a fundamental sense.

Perhaps one of my colleagues could expand on it.

Well, the straws in the wind that we have are . . . STAT
first his speech to the Party Plenum in which he seemed to be indicating his preference for more discipline. And he has, since coming to power, brought in Aliyev who was in Azerbaydzhan as First Party Secretary. He has now been made the First Deputy Chairman of the Council of Ministers. Aliyev had a background in the KGB. He came to Azerbaydzhan when it was saturated with corruption, cleaned it up, and has gotten high marks for restoring discipline. And the fact that he was brought in as the second man in the governmental hierarchy suggests that is the way they would like to go, focussing on tightening discipline within the existing system rather than reforming the system except after a long period of experimentation perhaps.

Senator Proxmire. Chairman Rowen, you put a lot of emphasis on the failure of the Soviet Union to improve its productivity because they were too highly centralized. You also indicated that Andropov was more likely to promote decentralization if he were secure, felt secure. When are we likely to get some indication of this? And do you feel thoroughly convinced that this is a problem for the Soviet Union, one of the reasons why they have been unable to improve their economic performance?

Chairman Rowen. I have really seen nothing to suggest that

he is thoroughly convinced that major economic reform, decentralization, is required. There is evidence that he leans in that direction to some degree, but I would stand corrected by my colleagues about it. But I haven't seen anything that suggests he is a thoroughgoing reformer, decentralizer.

He obviously has a major problem with the party apparatus.. The whole structure, the whole system, has built into it an enormous amount of rigidity. A lot of people would lose power and jobs and perquisites if there is a reform. And he has to proceed very carefully to shape that system. Whether he will try to is really hard to say. My guess is it will take a long time for us to be clear on it.

Senator Proxmire. Isn't there some indication of this in the experience that Andropov had in Hungary? There has been a Hungarian-kind of decentralization in the farm sector, I understand, which has been viewed as fairly successful. And as a result, it seemed to have been one of the elements in their improved productivity as compared to the Soviet Union and also as compared with their performance in the past.

Chairman Rowen. There is no doubt the Hungarian performance has been better. But how much he has learned from that, is committed to it--as suggested, if we look at his early appointments, they don't show it.

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Senator Proxmire. He was as opposed to that as anybody in the Soviet Union. Wasn't he as Ambassador to Hungary and later the person who perhaps had more to do with the Hungarian revolution and so forth than anybody? Is that correct?

Chairman Rowen. I am not sure more than anybody, but perhaps he was.

Can you comment on it?

I just wanted to mention that at the Central Committee meeting he did make reference to learning from the experience of fraternal countries. In reference to Hungary, I assume he said that it is necessary to act with caution, to conduct experiments. Well, when you talk about conducting experiments, that has been the kiss of death to Soviet reform. Over the years they have proceeded much too cautiously. And it has only been in very narrow sectors that they have introduced reforms. And if he is going to proceed along those lines, the outlook, I don't think is a very promising one.

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Senator Proxmire. I appreciate that. It is a very helpful answer. But would you provide for the record a discussion of Andropov's involvement in Hungary, his role with respect to the economic reforms there, and English translations of any statements he may have made about the Hungarian reforms and about the subject of economic reform in the Soviet Union?

Chairman Rowen. We will certainly do that.

You know, he is 68 years of age, I believe.

Senator Proxmire. That is pretty young by the standards of leadership in the Soviet Union, isn't it?

Chairman Rowen. Well, this is a fellow who is just starting.

Senator Proxmire. None of them are spring chickens.

Chairman Rowen. If experimentation is to be taken

literally, it would take years, really, to experiment. If that is to be taken seriously, it takes years to get experimental results. How long will he be here? Nobody knows. But I wouldn't say his access to power is a clear signal by any means that there are going to be Hungarian-type economic reforms.

Senator Proxmire. The Soviets are experiencing a slowdown in economic growth, as is virtually all of the industrialized West and Japan. It seems to be a worldwide slowdown. Yet, the Soviet economy is often described as in a state of crisis while we view ourselves as temporarily in the down side of the business cycle. What do you believe is the fundamental difference between the economic slowdown in the Soviet Union and what is happening in the West? Are the slowdowns in the two camps related in any way?

Chairman Rowen. Good question. And I can only give you a conjectural answer.

The slowdown in the East seems to me to be systemic. The statement really dealt with most of what we know about the causes of it. The one in the West seems to me to be more cyclical. It has to do a lot more with the effect of the sharp increase in the price of oil in the early seventies and the high degree of world inflation that is associated with that. The wringing out of that inflation, which has been going on for the last couple of years, has partly caused the downturn. It is very likely a cyclical process. There is likely to be a pickup, although not necessarily a vigorous one, but some improvement. It is a different economic system, different causes.

Senator Proxmire. You don't think there is a sufficient amount of trade between the Soviet Union and the other Warsaw Pact countries and our country and NATO countries to relate them to some extent so that a recovery here would also spread to some recovery there?

Chairman Rowen. The amount of trade is really so modest.

Senator Proxmire. What is that?

Chairman Rowen. It is very modest; indeed, the trade of the entire Eastern block with the West.

Senator Proxmire. My time is almost up.

Chairman Rowen. -- is extremely small.

Senator Proxmire. May I just ask you about another element of this? You talk about their strong element being secondary education, but the figures that you gave were pretty weak compared to ours and compared to European standards. That is the 23 percent. Then, was that the figure of the students graduating from high school?

Chairman Rowen. Yes.

Senator Proxmire. It is much lower than ours. How would you compare their standard with ours and with the Japanese? Would you say that their elementary secondary education is better than ours in the scientific area -- mathematics about the same or not as good?

It is unquestionably not as good as the Japanese; I'm almost certain not as good as the Japanese, but better than ours in terms of the curriculum.

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Senator Proxmire. On the other hand, the numbers are less.

I think that referred to the percentage of population who had a high school education which includes all of those growing up in the 1920s and 1930s who did not have. But now education through high school is almost universal.

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Senator Proxmire. Then, I wanted to know about the benefits to the Soviet Union of the completion of the pipeline. How much foreign exchange, hard currency, would that engender? Would that double or increase it by 20 percent or 25 or 50? I just have no idea, and it would be helpful if you could give some notion.

The figures that I have are that by 1990, the gas pipeline would increase their hard currency export earnings by \$5 billion. They are earning now about \$24 billion in hard currency from commodity exports. So it would be substantial.

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Senator Proxmire. About 25 percent, about a one-fourth increase?

Yes.

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Senator Proxmire. There may be almost 25 now; increase it by about \$5 billion, about one-fourth increase.

This is by 1990. And at the same time, it will not offset the loss in revenues from oil exports which we estimate by 1990 are likely to be lower by some \$7 to \$10 billion.

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Senator Proxmire. Thank you.

Senator Symms?

Senator Symms. Thank you, Mr. Chairman.

Mr. Rowen, as you know, I come from Idaho. And we are a state that produces about half of this country's silver

production. And last year during the annual or biannual effort that we have made in Washington by the Silver Users Association to try to dump the national stockpile of silver--we go through this trial about every three or four years; I am sure you are aware of this, but in 1981, the price of silver continued to decline until we have about half of our mines closed now.

And a very well-respected metal specialist that speaks in my state quite often from Spokane, Washington, from the Mining Association, [] who is now, I believe, the head metal specialist for Payne Webber, has made some pretty outspoken claims out there that when we had a policy here that helped get the silver, the government policy here, opposing to sell silver out of the stockpile drove the price of silver down; the ratio between gold and silver got to about 55 to 60 ounces of silver being equal to one ounce of gold, and that his claim was at that time that the Russians were making massive sales of gold and converting it into silver.

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Do you have an indication that is true?

Chairman Rowen. Buying silver? That is interesting.

Senator Symms. Not our silver, but, you see, our silver sale laws say we can't sell it to a foreign buyer, but that is really rather--the way it works out, you can buy silver on the London Metal Market so it doesn't really matter. Is there any way to substantiate that? I get asked that question.

[] They have made from time to time very large sales of gold. They sold about \$2.7 billion worth in 1981. When they have sold gold, it has been because they had a hard currency

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trade deficit.

I can track the gold sales against their hard currency trade accounts. I don't have--

Senator Symms. They use that for grain or anything?

Chairman Rowen. We will have to submit to you any information we have on silver purchases.

Senator Symms. Do you have any information on them purchasing it?

Chairman Rowen. We will have to submit that to you.

I have not seen any indication they were selling gold to buy silver. STAT

Senator Symms. Or just buying silver.

They have bought silver from time to time. STAT

Senator Symms. Substantial amounts of it? Are they a net importer of silver?

No, they are not. They are providing silver, I believe, to Eastern Europe, importing some on their own. But we can provide you with what we know about the trade in silver. STAT

Senator Symms. What would you think would happen to American agriculture which relies quite heavily--another subject here--on exporting agricultural products? Without an export market, we wouldn't be able to survive.

I notice you make reference to their bad weather. But isn't it a fact that most of their problem with their weather is really just a figment of the government's imagination over there and if they just had relaxed on the farmers, they would produce all they use and then some?

Chairman Rowen. Once upon a time, they were an exporter of agricultural products to the world, before the Communist revolution.

Senator Symms. Is it true they grew more grain per capita in 1913 than they do today?

Chairman Rowen. I am not sure. Does anybody know that figure?

I am not sure.

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Chairman Rowen. It is possible. I wouldn't exclude that.

Senator Proxmire. Would you find out for the record? We would like to have that.

Senator Symms. The point I would like to make is sometimes I wonder if we could ever inundate a Sears Roebuck catalog, we would lose our agricultural market because I don't believe their weather is any worse than in northern Minnesota or Western Canada.

The studies that have been made, climatic analogues of Manitoba or Saskatchewan or even comparisons between the Western USSR and Western Europe, Finland, Sweden show that they have considerable potential for an increase in yields of some crops, especially forage crops. They have less potential for large increases in grain yields.

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Senator Symms. Senator Proxmire made reference to in some areas where maybe you were talking about Hungary, but some areas, isn't it true in Russia where they allow people to make a profit off of what they--

Chairman Rowen. Private plots are permitted. It is not a regional thing, but they do permit private plots where people do

private farming. The area is really very small, very limited. And it produces a very large, very disproportionate share of output for the obvious reason that there is an incentive for people to do it.

Senator Symms. I have never seen it, but have talked to my colleagues. And you can look right down the fence line. It is bad weather on one side and on the other side fertile crops. Is that a verifiable fact?

Chairman Rowen. Absolutely well-known. A large part of the value of output of agricultural products--not grain, but other products--comes from these private plots.

The private plots don't suffer as much from drought. They get the water.

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Senator Symms. Where they have freedom, they can produce agriculture, and where they don't have freedom, they have bad weather.

Chairman Rowen. That's about it.

Senator Symms. So their weather forecasts or properties are the one that gives them the bad weather.

Chairman Rowen. The only reason for me mentioning weather is that the system is permanently unproductive. And so if you look at the fluctuations from year to year, that is mostly weather, it appears.

Senator Symms. Right. In other words, their system is so inflexible in agricultural production that if everything goes right from the weather standpoint, they might get a good crop in spite of themselves and the system. But otherwise, we can look

for continued--

Chairman Rowen. It has to be unusually good weather for them to do reasonably well.

Senator Symms. Thank you very much.

Thank you, Mr. Chairman.

Senator Proxmire. Chairman Rowen, you show a parallel in the economic growth slowdown of the USSR and OECD countries during the 1970s. You referred to that, I guess, a little earlier. But was this a coincidence or were there similar factors at play?

Chairman Rowen. I believe it was a coincidence. As a matter of fact, the Soviet Union is not an exporter of finished goods, but a raw material exporter and generally benefited from the high inflation in the West during much of the 1970s.

Senator Proxmire. And they would also suffer from the world glut; isn't that right?

Chairman Rowen. That's right. The Soviet Union did benefit very much from developments which hurt the Western economies. It is true that in the last several years commodity prices have fallen, which has hurt many Western countries. It has also hurt the Soviet Union as a raw material exporter. So there has been some convergence in the last few years for that reason. Prices turned against Mexico and against Brazil, many raw material producing countries, and also against the Soviet Union.

Senator Proxmire. How about improved relations with China? What effect, if any, would that have, economic effect? Obviously, there might be some reduction in the Soviet troops

stationed on the border or near the Chinese border. But would there be any other significant benefit to the Russian economy?

Chairman Rowen. It is hard to see it. They don't really have much to offer each other economically. China is more seriously embarked on economic reforms than the Soviet Union shows signs of so far. But those are Western-type economic reforms. And China's trade with the West is much more than the trade with the Soviet Union. And simply from the Soviet standpoint, I would be very skeptical that there is much promise there for any significant improvement in their economic performance.

Anybody disagree with that?

☐ No.

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Senator Proxmire. I want to be sure, I think I know, what you said on this, but I want to have it clear on the record. Is the Soviet economy in or about to enter a state of crisis or is it so weak and vulnerable, it could become unstable or collapse in the near future?

Chairman Rowen. It is in a sort of crisis in the sense that the decline in productivity growth I showed in these figures, discussed in the statement, shows that they are in a kind of crisis all right. But it is not one that seems to us likely to result in collapse. We are obviously looking for glimmerings or signs that might indicate real collapse, Polish-type collapse, for example, with the economy going down 20 percent in economic output.

Those signs are not evident. The system has gotten

stagnant. It is practically in a state of level output, but collapse seems most unlikely.

Senator Proxmire. Now, you show that in 1961 to 1970, there was a better than 5 percent growth during those ten years in the gross national product of the Soviet Union. And industrial growth was even greater. It was 6.5 percent. That was more than 40 years into the economy's domination of the Soviet Union with a roughly similar political system, a change to some extent in personalities and so forth.

But yet, 43 or 44 years after the revolution in '61 and in '70 with 50 years after it, you have this enormous growth. Why couldn't conditions such as existed in '61 to '70--what is there to make us believe that they won't recur again and permit another period of very sharp growth compared to the situation now and compared to the situation in this country?

Chairman Rowen. Well, during that period, they still had lots of labor, lots of raw material, cheap raw materials--

Senator Proxmire. They still do have raw materials, don't they?

Chairman Rowen. More costly now.

Senator Proxmire. But your presentation indicated they had a great abundance of a whole series.

Chairman Rowen. They have, but they are located in increasingly remote parts of the country where the costs of extraction and transportation are growing very rapidly. So once they could devote a significantly larger share of output to investment, but this is not true today. They don't have the

influence of abundant labor, increasing investment capital, or really cheap raw materials they had in the earlier time.

Senator Proxmire. Much has been said about the fact the Soviet defense spending takes up 11 to 14 percent of their gross national product, an enormous burden compared to our own. But that approach to estimating the defense burden assumes there are opportunity costs to defense allocations and that defense activities can be compared with the costs of equivalent activities in other sectors. How significant is that way of estimating the defense burden in a system that does not employ market prices?

Chairman Rowen. Mike?

[] The alternative is to do it in established prices, the Soviets use themselves, and to try to assess the burden that way. I don't believe we have ever done that, but I don't think it would differ greatly. The burden estimate might be a percent or two different.

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[] I think you may be asking about the effect of the vagaries of the Soviet pricing system in which relative prices do not really reflect the relative amount of resources used. And it has been argued that you can't use the ruble value as a measure of the opportunity cost. You can take the resources and put them into many occupations and get a different return, depending on where you put them.

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I think this makes it difficult to measure the burden. I think this means that to measure the burden, you have to conduct some sort of simulation. And we have tried to do this through

economic modeling efforts, tried to some extent to assess the effect of taking money away from defense and putting it into investment and then determine the effect on GNP. And if one were to arrest the growth in defense spending, better yet reduce it, you can have a quite significant impact on the rate of growth of GNP according to our calculations.

Senator Proxmire. Is it possible that some of the explanation for that dramatic change that you have told us about in figure 1 here is because in that earlier part, they had a smaller proportion of their gross national product in defense and this latter part where their production, their growth, is less, they had a much heavier part? Is that a part of the explanation?

I think that is very true. And I can give you one example. We have been talking about the problems in steel. We have estimated that Soviet defense, for example, takes about 10 percent of the rolled steel output in the Soviet Union. We have projected steel output through 1985. If defense spending continues to increase at about 4 percent per year, we have calculated that of the total increment in rolled steel output between 1980 and 1985, defense would take 40 percent, 40 percent at a time when steel is short throughout the economy.

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Senator Proxmire. Is the fact that military conscription is used as a kind of national education and training program, especially for young men from rural areas, and that troops and equipment are used in construction, harvests, and elsewhere in the civilian economy adding to the difficulty of understanding the defense burden?

Chairman Rowen. Mike?

It does somewhat because you have to figure out the appropriate opportunity costs of these people in the civilian economy. This is complicated because military training teaches them to do things that benefit the civilian economy--for instance, to drive trucks that they have never seen before. STAT

In any estimate of total defense costs in rubles, personnel costs, however you want to calculate them are relatively small. Labor is cheap. Procurement is expensive. Procurement of highly sophisticated weapons is taking an increasing share of the Soviet defense effort. And thus, procurement costs have a far greater impact on our burden estimate than do personnel costs.

Senator Proxmire. Could you make an estimate of the part of the Soviet so-called military that actually goes into construction, goes into agriculture, goes into education, goes into these other areas?

Not really. We estimate the number of Soviet construction troops, for instance, and keep track of what they are doing. We don't estimate separately the value of their output in, say, civilian construction. STAT

Senator Proxmire. Is it conceivable that any significant proportion of this 11 to 14 percent of the GNP for defense is actually expended for non-military purposes by the military?

It would be a very small proportion. STAT

Senator Proxmire. As much as 1 percent?

Less than 1 percent. STAT

Senator Proxmire. What evidence is there of how the Soviet

leadership and the central planners view the military burden? That is, whether they believe it is growing, how they measure it, and the effects it is having on the civilian economy.

Chairman Rowen. They certainly don't regard it as a burden in the same sense that defense is a burden in any Western democratic society. The system is so dependent on the power of the state, the essence of the system, that the concept of burden, I believe, doesn't have the same connotation as in the West.

Senator Proxmire. In some of the responses they gave to MX, for example, and our initiatives in the defense area, condemning, criticizing, ours, don't they argue this is something that forces them to spend money in this area and us, too, and the result is a loss on the part of both countries of improved opportunity for more productive life?

Chairman Rowen. Well, it is hard to know how much of that is for effect and how much they believe. I think a lot of it is for effect. They have learned that with time, that is the sort of thing that plays well in the West. And therefore they say it. I repeat that the concept of consumer welfare being dominant doesn't exist in the Soviet Union.

Senator Proxmire. Maybe I misstated my question. What I was thinking of is the loss in the productivity opportunities. Obviously, if instead of building a big ship or building tanks, they could build a plant, they could make increased investment. They could construct, build more tractors. They could do many other things that would be helpful not in making life easier, but in making the economy more productive--in the long run perhaps

build a stronger military power.

Chairman Rowen. I am sure the opportunity cost concept is there. I understand that at least the technical people, the planners understand that, and if the bind has gotten more severe, as these figures show, the fact must be weighing on them heavily. I think they have reached a stage where, as you suggest, they have to be concerned about their future military power. They need a growing economy that will support their future power base at a high enough, strong enough level.

If they do take something from defense they will do it for this reason. It is a matter of meeting politically necessary requirements which are certainly very different from those in the West.

Senator Proxmire. Do you think they would, if you have a figure like this, know of it? They must know of it. And it must haunt Andropov and all the Communists seeing what has happened to their gross national product, industry growth, especially in view of their plans and so on. They must see when they put money into defense, although they are going to do it if they feel they have to, and it is their top priority, that if they didn't have to do that, they might be able to have a little more for civilians.

Chairman Rowen. That is true but as our defense spending has fluctuated over time, over decades, up and down, up and down, the Soviet Union has continued growth. I mean, the priority it gets is absolutely No. 1.

Senator Proxmire. The point you make that the Soviets are basically self-sufficient with respect to food is worth

emphasizing because we hear the statement made so often that the Soviets can't feed their own people. Would you discuss briefly their food self-sufficiency in light of the fact that they import so much grain?

Chairman Rowen. The statement has to do with their ability to grow calories. They can grow enough calories to feed themselves, but it would mean very much less meat. So it is a meat issue rather than a calorie issue with them.

That's right. If they had not imported Western STAT grain, consumption per capita of meat would have fallen over the last six years.

Senator Proxmire. But there again, I read about strikes and riots when there has been a shortage of meat. Doesn't this have an effect on their production and an effect even on their military capability if they don't have the protein that they need, that their people demand?

Chairman Rowen. I think the reports are true, but a little over played. Meat is important for the reasons you suggest. It is important for consumers who think it is important. They have good reason to believe that. And they can't produce enough of it themselves.

Senator Proxmire. I understand that Soviet foreign grain purchases have lagged behind our expectations. They haven't bought as much from us as we thought they would. What is your estimate of their import requirements? How much have they purchased so far and from whom? And how do you explain the fact that so far, they have bought so little from us and from others?

[] Our most recent estimate of grain requirements STAT
has been defined as simply being able to maintain meat production
at current levels or at the levels of last year through this next
fiscal year, which is about 42 or 43 million tons of imports.
That is a residual calculation, assumes no changes in stocks, and
relies on preliminary estimates about availability of fodder
crops and so forth.

I think that they have either bought or lined up about 24 or
25 million tons of grain. But we can provide that to you with
the rest of the figures.

Senator Proxmire. Can you tell us maybe for the record who
bought that?

[] Curiously enough, even after the food program STAT
was announced in May and at a time when the drought in some parts
of the Soviet Union was already known to the leadership, their
imports of grain tailed off, reached a level of about four or
five million tons per month in April and May and tailed off
through the summer.

Senator Proxmire. Why was that?

[] We don't know. We don't know whether they had a STAT
more favorable estimate of what the --

Senator Proxmire. Have the imports picked up since then?

Chairman Rowen. Jim?

[] They have picked up a little this fall, but not STAT
nearly as much as we would have expected. One possibility is
that they have improved their import handling capacity so much
that they can, if they step up their purchases quickly in January

through June, still import as much as 40 million tons of grain. Whatever our estimates say, we don't have the evidence yet that they have stepped up those purchases.' Now, as far as not buying from the United States, they say, they have told a large number of Western visitors, Western firms, that they were going to buy from the United States only as a last resort.

Senator Proxmire. Now, this is on an entirely different subject. You summarized the growth of Soviet strategic and conventional forces overturning the former U.S. numerical superiority in intercontinental nuclear delivery weapons and reducing the credibility of NATO's forces.

Let me ask you, do you conclude that the Soviets now have superiority over the United States in strategic forces and over NATO in conventional forces?

Chairman Rowen. That is really a different subject from our subject of the Soviet economy and its performance--the military. No, I wouldn't conclude that. But I think there is no question that they have made vast strides, and everybody has agreed on that.

Senator Proxmire. You wouldn't conclude they had superiority over the United States?

Chairman Rowen. This isn't an intelligence question, but I wouldn't personally conclude that.

Senator Proxmire. And how about NATO conventional forces?

Chairman Rowen. It is clear that they have that.

Senator Proxmire. It is clear, you say, that they have?

Chairman Rowen. That they have that, yes.

Senator Proxmire. Well, now, let me just ask a little bit about that. If it is clear, how do you determine, for example, the NATO balance? Don't we have far greater fire power, for example, far greater tonnage? They have more ships, but it seems to me it is a very, very hard thing to compare our aircraft carrier fleet, for example, with anything they have, it is so overwhelmingly superior. And our submarines. They have more submarines, but their submarines are more vulnerable, I understand, not as quiet as ours.

Chairman Rowen. Again, this isn't an intelligence question. I was referring to the balance in Europe, on the ground in Europe. Our naval forces are a substantial element. That is certainly a decisive theater. It is a decisive factor really at sea.

But this really is a far cry from our subject, and we didn't come up here to ---

Senator Proxmire. It is a far cry, but, on the other hand, it relates to it. One of the reasons why we are so curious and interested in their economy is because it does relate to our better understanding of the military capability. And there, of course, to the extent that the economy is a vital part of your military potentiality, at least, obviously, the NATO countries have a far greater economic potential than the Warsaw Pact; isn't that correct?

Chairman Rowen. Oh, yes. If you add up the calculations, I am sure the GNPs of the NATO countries ---

Senator Proxmire. The GNP of the Common Market, for

instance, is bigger than ours.

Chairman Rowen. The combination substantially exceeds that of the Soviet Union, but that isn't the same thing as fielded forces and troops.

Senator Proxmire. We have a Japan that seems to be ready, willing and able and anxious to get moving militarily, too. But that is something else, I agree.

What is the likelihood that the Soviets will be able to maintain modest growth in oil production and oil exports to the West through 1985?

As we said in our statement, we have an examination of this underway. It will be available in a month or two. I think the preliminary feeling is that oil production will hold up close to its present level through 1985. The prospects for exports are hard to determine. Our estimates suggest that the requirements for domestic consumption are going to continue to increase in this period. They have not been able to make the substitution or conservation that they had planned. If this continues to be true, then exports would be squeezed. If you believe that they can't cut back much more on Eastern Europe, that would mean that exports to the West would decline.

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I must say, however, that in response to the hard currency trade deficit of 1981, as Mr. Rowen said earlier, they did make some extraordinary efforts. They cut back on sales to Eastern Europe. Exports to the West, which had been declining for two years, were increased from about 980,000 barrels per day to perhaps, as much as 1.1 million barrels per day.

In the process, they sustained the kinds of costs that Mr. Rowen indicated in his testimony. I think, on balance, our feeling is they can't continue to do that and that exports to the West will decline again.

Senator Proxmire. Will you also tell us the results of recent talks with our allies about credit terms to be extended to the Soviets, the effects of the U.S. decision to lift the Siberian gas pipeline equipment restrictions, and whether the Soviet leadership views this episode and the controversy that still exists in the West as a victory for them?

Chairman Rowen. I can't really deal with that authoritatively. We were not involved with those discussions with the allies directly. From the Soviet side, I could comment. It is pretty clear that they welcomed the disagreements among the West. And they were probably disappointed to see these disagreements wind down. And if you divide NATO nations internally, that has to be beneficial to them.

Senator Proxmire. How do you assess the possibility that the Soviets might be capable of increasing their exports of non-fuel minerals, such as manganese, nickel, and chrome, with which they are richly endowed, in order to increase their hard currency earnings so as to be able to purchase more Western equipment or control their trade balance?

We have completed a study--in fact, there is a study in draft that deals with the question of their ability to increase non-energy exports for hard currency through the 1980s. We concluded, after looking at a series of these possible

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sources of increased earnings, that they could increase exports only marginally. Let's say by about \$3 to 4 billion in 1981 dollars between now and 1990.

The reasons, sir, for that are that the costs of extraction have increased greatly. The minerals, the raw materials, timber, are coming more and more from the eastern parts of the USSR. It is very expensive. And that while there is a great potential there, they have not yet undertaken investments that would allow them to increase exports very substantially in this decade. There is a very long gestation period involved in developing coal out of Eastern Siberia, or turning the coal into energy, and in developing timber out in the Eastern Siberia and some of these minerals up in Noril'sk.

Senator Proxmire. A study by the Commerce Department for the Joint Economic Committee earlier this year projects a large Soviet trade deficit with the West by 1985. Is it your assessment that a large deficit is likely, or might they take actions as they did this year to avoid it?

Chairman Rowen. A large deficit would have to be financed. And there is a question about the willingness of Western banks to provide the credit. It would be more likely they will keep trade in closer balance as they proved this year. But there may be another opinion on that.

Well, sir, I think they still have room to cut imports as they did this year. They may also choose to hold down grain imports. If they have a little luck with the weather this coming year, grain import requirements might drop into the range

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of 20 to 25 million tons, which is less than we project for this year. So I think there will be a substantial trade deficit, but perhaps not all that much larger than the one, for example, that occurred in 1981.

Senator Proxmire. You correctly describe the slow growth of the labor force as a weakness. And I think it is. But isn't the other side of the coin that slow population growth means fewer mouths to feed and reduced demands for energy, consumer durables, and so forth? Do you take that into account?

Chairman Rowen. Over the long run, that is certainly the case, but the sharpness of the change in the growth in the labor force, the rapidity of the change, is really what dominates. It is not a gradual, roughly offsetting, adjustment as you say by in both in the mouths to be fed as well as in the hands that are working. This is a striking reduction within a very short period of time in the growth of the work force, and the increase in the number of mouths to be fed will not be affected to nearly the same extent. In fact, the population is still growing.

Senator Proxmire. Mr. Rowen, there are two theories about Andropov. I would like to get your opinion on them. The first is that Mr. Andropov has come previously out of the KGB so has a better grasp of Soviet economic data, Soviet societal problems, U.S. strengths and weaknesses, than any other Soviet leader. Being exposed to the West over the years, he has moderated his viewpoint, it is alleged in theory.

Some have even gone as far as to say he is a closet liberal.

The second theory is Mr. Andropov has manipulated the

Western press and opinion leaders by spreading the theory that I have just enunciated, and is really no more than an extremely ruthless KGB chieftain who put down the Hungarian rebellion in 1956 and has imprisoned tens of thousands of dissidents.

What is your assessment of those?

Chairman Rowen. There is a contradiction here. There may be some truth in both positions. In intelligence, he was obviously in a position to learn a great deal about the world and how it works. And being, apparently, an intelligent man in that sort of position, he may indeed have learned a lot. It is also clear there has been a line peddled by the KGB that he is really a nice guy, and this is not inconsistent with his also being a smart and tough guy.

So, I think we have to wait and see.

Senator Proxmire. It could go either way?

Chairman Rowen. Well, I don't think there is any question that he is very competent.

Senator Proxmire. And no question that he is what?

Chairman Rowen. That he is very competent.

Senator Proxmire. Competent?

Chairman Rowen. Yes. I mean, he is a very able person. There is plenty of evidence for that. And there also is no question that he has been in a position to observe how the West works.

Senator Proxmire. In a way that is bad news and good news. The bad news is if he competent, we don't want as a coach to be playing against a team that may have a lot of competence in

their coach. We don't like that. On the other hand, if competence means he is realistic and understands that nuclear holocaust would be suicide for both countries and understands that kind of military realism, it could be good news.

Chairman Rowen. You stated it well.

Senator Proxmire. Now, is there evidence of Mr. Andropov's ties to the Soviet military that would suggest that he has ever taken a questioning role about defense spending versus economic development?

I don't know of any evidence.

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Senator Proxmire. What is the war in Afghanistan costing the Soviet economy in dollars, or rubles? Can you give us any idea?

We have estimated the cost at about \$2.7 billion in 1980. We are currently working to update that figure, but I don't expect it to change much.

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Senator Proxmire. \$2.7 billion in 1980. Was that a full year? When did that start running?

Chairman Rowen. December 1979.

Senator Proxmire. December 1979? Do you have any seat-of-the-pants estimate whether that would have been the same in 1981 and 1982?

I think it would be about the same. And in all three years, costs associated with Afghanistan amounted to about 1 percent of total Soviet military costs. We are coming up with a little bit better estimate because we have some better evidence on equipment losses and things like that which we didn't have in

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1980. About two-thirds of those costs are incremental. The other costs would have been incurred anyway.

Senator Proxmire. We have some other questions, Chairman Rowen, for the record.

I want to say you have done a superlative job. I think your presentation here this morning has been most enlightening. And I am very anxious for that reason to get a sanitized copy or version for the members of the committee and Congress. I think it is a real public service to make this kind of information available on the Soviet Union.

And I want to thank you and your colleagues, too, for their very helpful participation.

Senator Proxmire. The committee will stand adjourned.

(Whereupon, at 11:40 a.m., the hearing was adjourned.)